



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/595,551	06/16/2000	Basavaraj B. Patil	P1003	9790

7590 05/03/2006
D. Scott Hemingway
Hemingway & Hansen LLP
Preston Commons West, Suite 460
8117 Preston Road
Dallas, TX 75225

EXAMINER

LANIER, BENJAMIN E

ART UNIT	PAPER NUMBER
----------	--------------

2132

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/595,551

Applicant(s)

PATIL ET AL.

Examiner

Benjamin E Lanier

Art Unit

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 - Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed 03 April 2006 amends claims 1, 11, 20, 29, 37. Applicant's amendment has been fully considered and is entered.

Response to Arguments

2. Applicant's arguments filed 03 April 2006 have been fully considered but they are not persuasive. Applicant's argument that the cited portions of the specification (Page 11, lines 23-25 & Page 13, lines 18-20) provide support for the claim amendments filed 03 November 2005 is not persuasive because while the citation portions of the specification may disclose "the SA agreement requires the sending node to share information with the receiving node about the type of cryptographic method, the algorithm, and the keys used in the encryption process", the claims were amended to include "requiring at least one security association between the home network and the foreign network." The cited portions of the specification do not support requiring that there be a security association between the home network and the foreign network, but instead supports when a security association exists, the sending node is required to share information with a receiving node. The specification may support the existence of a security association between the home network and foreign network, but never suggests that this security association is **required**. The same can be said for the second claim limitation in the body of claim 1. With respect to the third claim limitation in the body of claim 1, Applicant has provided no support for the requirement of all information packets transmitted from the mobile node to the home network having to be encrypted with an encryption mechanism. Therefore, the previous rejections and objections to the claim amendments filed 03 November 2005 will be sustained.

Art Unit: 2132

3. Applicant's argument that the Calhoun reference does not disclose the amended claim limitations that require a service level agreement broker and the AAA server to be a separate entity is not persuasive because Calhoun discloses that there is a foreign AAA server and a home AAA server (Page 22, 4.1). The foreign AAA server can be interpreted as the claimed AAA server, and the home AAA server can be interpreted as the claimed service level agreement broker. The home AAA server establishes and maintains security associations (Page 22-23, 4.1) as required by the claims, and the foreign AAA server receives message packets and performs authentication and authorization as claimed (Pages 22-23, 4.1).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-4, 8-14, 17-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The added material which is not supported by the original disclosure is as follows: the requirement of functionality is never recited in the specification.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 2132

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calhoun (IETF – “DIAMETER Mobile IP Extension”), in view of Caronni, U.S. Patent No. 6,507,908.

Referring to claim 1, Calhoun discloses a method for Authenticating, Authorization, and Accounting Policy Protocol that is used between two entities for various services wherein a mobile node is allowed to change its point of attachment to the Internet without service disruption (Pages 1-2). The mobile node has a foreign agent and a home agent, with a home server (Page 22, 4.1), wherein the foreign agent and the home agent communicate using a generated key (Page 14, 3.8), which meets the limitation of establishing at least one security association between the home network and the foreign network, wherein the home network has at least one home agent network server. The home network sever generates a key for use between the foreign agent and the mobile node (Page 12, 3.5 & Page 23, 4.1, last paragraph), which meets the limitation of establishing at least one security association between the mobile node and the foreign network using a registration message to transmit a public key. A key is also generated for use between the mobile node and home agent (Pages 16-17, 3.11), which meets the limitation of requiring that any information packet to be transmitted from the mobile node to the

home network be encrypted with an encryption mechanism, transmitting the information packet from the mobile node using the security associations to support secure communications from the mobile node, decoding information from the encrypted information packet at the home network to retrieve the information. Before reaching the home agent the communication packet will be routed through the foreign AAA server (Page 22, 4.1), which meets the limitation of routing the information packet through an AAA server performing authentication and accounting functions. The home AAA server establishes and maintains security associations (Page 22-23, 4.1), which meets the limitation coupling a service level agreement broker to the foreign network, separate from said AAA server, to support establishment and maintenance of a plurality of security associations for multiple network and multiple nodes used in communications on the communications system. Calhoun discloses that the registration reply is generated by the home network agent and that the registration reply contains all the keying material to be used by the mobile node (Page 24, forth full paragraph): Applicant's specification defines the care-of-address as an identification of the foreign network. Therefore, the care-of-address is taught by Calhoun on pages 22-23 where Calhoun discloses that the AMR (Mobile Node Request) is generated by the foreign network and then transmitted to the home network for authentication. The home network of Calhoun has an identification of the foreign network being used by the mobile node, which meets the limitation of said registration reply message originating at the home agent network server and transmitted to the mobile node to acknowledge registering the mobile node care-of-address with the home agent network server. Calhoun does not disclose that the foreign AAA server contains a firewall. Caronni discloses a secure communication system for mobile hosts wherein a firewall is in the mobile network (Col. 1, lines 13-28). It would have been

Art Unit: 2132

obvious to one of ordinary skill in the art at the time the invention was made to use firewall technology in the foreign AAA server of Calhoun in order to prevent unauthorized access to or from the mobile network as taught by Caronni (Col. 1, lines 28-31).

Referring to claim 11 Calhoun discloses a method for Authenticating, Authorization, and Accounting Policy Protocol that is used between two entities for various services wherein a mobile node is allowed to change its point of attachment to the Internet without service disruption (Pages 1-2). The mobile node has a foreign agent and a home agent, with a home server (Page 22, 4.1), wherein the foreign agent and the home agent communicate using a generated key (Page 14, 3.8), which meets the limitation of establishing at least one security association between the home network and the foreign network, wherein the home network has at least one home agent network server. System communications over the network conform to a specific security protocols (Pages 9-22). The home AAA server oversees the conformity of the secure communication by authenticating registration requests and generating keys (Pages 22-25), which meets the limitation of using a service level agreement broker to establish and maintain security associations. The security associations can be made with multiple foreign networks (Page 20, 3.16), which meets the limitation of a plurality of security associations. The home network sever generates a key for use between the foreign agent and the mobile node (Page 12, 3.5 & Page 23, 4.1, last paragraph), which meets the limitation of establishing at least one security association between the mobile node and the foreign network using a registration message to transmit a public key. A key is also generated for use between the mobile node and home agent (Pages 16-17, 3.11), which meets the limitation of requiring that any information packet to be transmitted from the mobile node to the home network be encrypted with an

Art Unit: 2132

encryption mechanism, transmitting the information packet from the mobile node using the security associations to support secure communications from the mobile node, decoding information from the encrypted information packet at the home network to retrieve the information. Before reaching the home agent the communication packet will be routed through the foreign AAA server (Page 22, 4.1), which meets the limitation of routing the information packet through an AAA server performing authentication and accounting functions, separate from the service level agreement broker. Calhoun discloses that the registration reply is generated by the home network agent and that the registration reply contains all the keying material to be used by the mobile node (Page 24, forth full paragraph). Applicant's specification defines the care-of-address as an identification of the foreign network. Therefore, the care-of-address is taught by Calhoun on pages 22-23 where Calhoun discloses that the AMR (Mobile Node Request) is generated by the foreign network and then transmitted to the home network for authentication. The home network of Calhoun has an identification of the foreign network being used by the mobile node, which meets the limitation of said registration reply message originating at the home agent network server and transmitted to the mobile node to acknowledge registering the mobile node care-of-address with the home agent network server. Calhoun does not disclose that the AAA server contains a firewall. Caronni discloses a secure communication system for mobile hosts wherein a firewall is in the mobile network (Col. 1, lines 13-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use firewall technology in the AAA server of Calhoun in order to prevent unauthorized access to or from the mobile network as taught by Caronni (Col. 1, lines 28-31).

Referring to claims 20, 29, Calhoun discloses a method for Authenticating, Authorization, and Accounting Policy Protocol that is used between two entities for various services wherein a mobile node is allowed to change its point of attachment to the Internet without service disruption (Pages 1-2). The network contains a home network having a home agent server coupled to a router capable of directing information packets to and from the home network (page 22, 4.1), and a foreign network having a foreign agent coupled to a router capable of directing information packets to and from the foreign network and a transceiver capable of performing wireless communications with at least one mobile node in the transmission range of the transceiver for the foreign network. The mobile node has a foreign agent and a home agent, with a home server (Page 22, 4.1), wherein the foreign agent and the home agent communicate using a generated key (Page 14, 3.8), which meets the limitation of establishing at least one security association between the home network and the foreign network, wherein the home network has at least one home agent network server. System communications over the network conform to a specific security protocols (Pages 9-22). The home AAA server oversees the conformity of the secure communication by authenticating registration requests and generating keys (Pages 22-25), which meets the limitation of a broker functioning as a consortium of security associations, said broker used to establish security associations. The security associations can be made with multiple foreign networks (Page 20, 3.16), which meets the limitation of a plurality of security associations. The home network sever generates a key for use between the foreign agent and the mobile node (Page 12, 3.5 & Page 23, 4.1, last paragraph), which meets the limitation of establishing at least one security association between the mobile node and the foreign network using a registration message to transmit a public key. Before

reaching the home agent the communication packet will be routed through the foreign AAA server (Page 22, 4.1), which meets the limitation of routing the information packet through an AAA server performing authentication and accounting functions, said AAA server separate from the broker. Calhoun discloses that the registration reply is generated by the home network agent and that the registration reply contains all the keying material to be used by the mobile node (Page 24, forth full paragraph). Applicant's specification defines the care-of-address as an identification of the foreign network. Therefore, the care-of-address is taught by Calhoun on pages 22-23 where Calhoun discloses that the AMR (Mobile Node Request) is generated by the foreign network and then transmitted to the home network for authentication. The home network of Calhoun has an identification of the foreign network being used by the mobile node, which meets the limitation of said registration reply message originating at the home agent network server and transmitted to the mobile node to acknowledge registering the mobile node care-of-address with the home agent network server. Calhoun does not disclose that the AAA server contains a firewall. Caronni discloses a secure communication system for mobile hosts wherein a firewall is in the mobile network (Col. 1, lines 13-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use firewall technology in the AAA server of Calhoun in order to prevent unauthorized access to or from the mobile network as taught by Caronni (Col. 1, lines 28-31).

Referring to claims 3, 13, 22, 31, Calhoun discloses that the foreign agent and the mobile node communicate using a generated key (Page 12, 3.5), which meets the limitation of establishing a security association between the mobile node and a correspondent node.

Referring to claims 2, 4, 12, 14, 21, 23, 30, 32, Calhoun discloses that the foreign agent and the home agent communicate using a generated key (Page 14, 3.8), which meets the limitation of establishing a security association between the home network and a correspondent node.

Referring to claims 5, 6, 15, 16, 24, 25, 33, 34, Calhoun discloses using public and private key encryption (Page 23, 4.1, last paragraph).

Referring to claims 7, 17, the Diameter system framework described by Calhoun is designed for cellular systems.

Referring to claims 8, 18, 26, 35, Calhoun discloses that security associations can be made with multiple foreign networks (Page 20, 3.16).

Referring to claims 9, 10, 19, 20, 27, 28, 36, 37, Calhoun discloses that system communications over the network conform to a specific security protocols (Pages 9-22), which meets the limitation of a service level agreement to manage the secure communication of information packets on the multiple security associations. The home AAA server oversees the conformity of the secure communication by authenticating registration requests and generating keys (Pages 22-25), which meets the limitation of a broker to assist in the use of service level agreements having a plurality of security associations for a plurality of nodes on the secure communications systems. The security associations can be made with multiple foreign networks (Page 20, 3.16), which meets the limitation of functioning as a consortium of service level agreements including a plurality of networks forming said system.

Conclusion

Art Unit: 2132

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin E. Lanier whose telephone number is 571-272-3805. The examiner can normally be reached on M-Th 7:30am-5:00pm, F 7:30am-4pm.

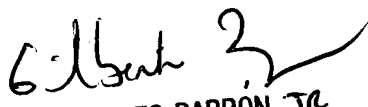
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2132

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Benjamin E. Lanier



GILBERTO BARRON JR
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100